Case 3446

Anolis chrysolepis Duméril & Bibron, 1837 (Reptilia, Squamata): proposed precedence over *Draconura nitens* Wagler, 1830

Charles W. Myers

Division of Vertebrate Zoology (Herpetology), American Museum of Natural History, New York, NY, U.S.A. (e-mail: myers@amnh.org)

Abstract. The purpose of this application, under Articles 23.6, 23.12 and 81 of the Code, is to conserve the name *Anolis chrysolepis* Duméril & Bibron, 1837, for a polytypic species of biogeographic importance. An older, less-used name *Anolis nitens* (Wagler, 1830), was rejected in a major revision (Vanzolini & Williams, 1970) as a name 'of uncertain application [and] uncertain geographical provenance', the first term being equivalent to nomen dubium as defined in the Code. The specific name *nitens* was published with a 4-line description in the monotypic genus *Draconura*; the type locality ('America') is vague and the holotype is unknown. It is indeed a nomen dubium that cannot unambiguously be assigned to any known lizard, although the possibility that the brief color description might prove diagnostic of a species waiting rediscovery cannot be rejected. Article 23.3.6 of the Code allows authors to use the junior name *Anolis chrysolepis* as valid. However, although never in prevailing usage historically, *Anolis nitens* nonetheless remains in competing use because of prior (and arguable) interpretation of Article 23. It is a major source of instability. It is proposed that the name *Anolis chrysolepis* Duméril & Bibron, 1837, be given precedence over *Draconura nitens* Wagler, 1830, whenever the two are considered to be synonyms.

Keywords. Nomenclature; taxonomy; Reptilia; Squamata; POLYCHROTIDAE; *Anolis*; *Draconura*; *Draconura nitens*; *Anolis chrysolepis*; lizards; South America.

---

1. Two species-group names currently are in competing use for a polytypic species of *Anolis* that is geographically widespread in northern South America. These are (1) *Draconura nitens* Wagler, 1830 (p. 149); type locality 'America', holotype unknown. (2) *Anolis chrysolepis* Duméril & Bibron, 1837 (p. 94); type locality, Mana, French Guiana, based on MHNP 2436, lectotype designated by Vanzolini & Williams (1970, p. 85).

2. The generic name *Draconura* (Wagler, 1830, p. 149) and its type species by monotypy, *Draconura nitens* Wagler, 1830 (p. 149), are based on brief Latin descriptions, translated as follows (from Myers & Donnelly, 2008, p. 105): '*Draconura*. Dragon's Tail. Crown and nostrils of *Dactyloa*; with somewhat inflated longitudinal throat fold; digits somewhat thickened near articulations; tail smooth, thickened and a little rounded at the base. (America.). Species: *Draconura nitens*. Green above, with a coppery gold sheen; below, whitish green with a silvery brilliance; tail totally golden green, with two bowlike dark spots above the sacral bone; thighs and digits weakly banded'.

3. The available name *Draconura* has long been considered a synonym of *Anolis* Daudin, 1802 (p. 50). However, the available species-name *Draconura nitens* cannot unambiguously be assigned to any known lizard based on the description alone (Vanzolini & Williams, 1970, p. 84; Savage & Guyer, 1989, p. 111; Myers & Donnelly, 1997, p. 58; 2008, pp. 105–107). The type locality 'America' is of limited use and no other author has examined the lost type specimen. Current application of *Draconura nitens* as a senior synonym of *Anolis chrysolepis* Duméril & Bibron, 1837 is based on limited subsequent usage and on the unstated premise that it does not belong to a species awaiting rediscovery.

4. Seven years after its description, Duméril & Bibron (1837, p. 91) placed *Draconura nitens* with a question mark in the synonymy of their new *Anolis refulgens* (type locality, 'Surinam' (locality questionable fide Hoogmoed, 1973, pp. 126–127)), a Schlegel label name. The new *Anolis chrysolepis* was named a few pages later (Duméril & Bibron, 1837, pp. 94–95).

5. Berthold (1840, p. 899; 1842, pp. 17–21; '1843' [1842?], pp. 61–65) treated the taxonomy under the subheading 'Ueber das Genus Draconura Wagl.' In recognising *Draconura*, Berthold accepted *Anolis refulgens* Duméril & Bibron, 1837 over *Draconura nitens* Wagler, 1830.

6. Other 19th century authors overlooked or ignored Duméril & Bibron's '?' in the *Erpétologie Générale* and accepted *nitens* (Wagler) without question and with little or no discussion as the senior synonym of *refulgens* (Wiegmann, 1834, p. 16; Gray, 1840, p. 114; 1845, p. 207; Fitzinger, 1843, p. 69; Peters, 1863, p. 142; Bocourt, 1874, pl. 16, fig. 25; O'Shaughnessy, 1875, p. 277; Boulenger, 1885, p. 91). Use of either *nitens* or *refulgens* as a valid species name in the secondary 19th century references are mostly simple listings of little taxonomic importance, although Bocourt (1874) added head and digit drawings of the holotype of *refulgens*. Most of these authors also listed *Anolis chrysolepis* Duméril & Bibron as a valid species, with no cross-referencing to *nitens*.

7. Boulenger's (1885) *Catalogue of Lizards* provided the starting point for several 20th century authors who were to deal with fresh anoles from Surinam, Guyana, and Venezuela. Boulenger (1885, pp. 89–90) assigned 15 geographically widespread specimens to *Anolis chrysolepis* but he had no specimens of *A. nitens*. Boulenger's (1885, pp. 91–92) treatment of *A. nitens* appears to have been paraphrased from Duméril & Bibron's (1837, pp. 91–94) original description of *A. refulgens*. (Boulenger correctly translated the symbols " and ''' used by Duméril & Bibron for cm and mm, but comparison of head, body, and tail measurements show that Boulenger's '108' mm total length is a misprint for 180 mm.) At the same time, Boulenger (1885, p. 92) named *Anolis leptoscelis* (= *A. trachyderma* Cope, 1876) on the basis of upper Amazonian specimens, three of which had been previously published as *Draconura nitens* by O'Shaughnessy (1875, p. 277).

8. In the early 20th century, Fowler (1913, pp. 171–172) described as a Venezuelan subspecies *Anolis nitens bondi*; Lidth de Jeude (1917, p. 46) mentioned *Anolis nitens* in Surinam and Barbour (1934, p. 143) followed Boulenger in listing *Anolis nitens* as a senior name over *Anolis refulgens*. Finally, field experience with living animals was provided by Beebe (1944), who, on the basis of color pattern differences, recognised both *Anolis chrysolepis* and *A. nitens* as being the most abundant anoles at localities in Guyana (Kartabo) and Venezuela (Caripito).

9. Shreve (1947) saw through the extensive color variation and synonymized *Anolis chrysolepis* under *A. nitens*. But Shreve also is the first author to question the adequacy of Wagler's (1830) description of *Draconura nitens*: 'As the original description of *nitens* is not very diagnostic, there appears to be some doubt about the applicability of the name. If it cannot be used, then *chrysolepis*, which was much better diagnosed, can be employed.' (Shreve, 1947, p. 524).

10. Subsequent use of *Anolis nitens* as the valid name for a few Venezuelan specimens (Roze, 1958, p. 246; Test et al., 1966, pp. 13–14; Donoso-Barros, 1968, p. 112) derived from Shreve's action above, but *Anolis chrysolepis* was not universally discarded and both it and *Anolis nitens* were continued as valid species in the influential *Catalogue of the Neotropical Squamata* (Peters & Donoso-Barros, 1970, pp. 51, 61).

11. Vanzolini & Williams then attempted to make order out of 140 years of confusion. In formulating their concept of *Anolis chrysolepis* Duméril & Bibron, 1837 as a polytypic species, Vanzolini & Williams (1970, pp. 83–86) considered 13 specific names presumably available for 'members of the *chrysolepis* species group' (a group containing two sister species fide Vanzolini & Williams, pp. 83–86, 104). The oldest name is *Draconura nitens* Wagler, 1830, which they concluded '*is probably, but hardly with certainty* [emphasis added], applicable to some member of the *chrysolepis* group. . .The type is lost, the type locality ('America') insufficiently defined, and the usage of the name extremely confused, having been used primarily for one of the color morphs possible to *chrysolepis* group animals in Surinam (Boulenger, 1885) or British Guiana (Beebe, 1944) or Venezuela (Shreve, 1947). Such a name could be employed only arbitrarily, and we therefore set it aside.' (Vanzolini & Williams, 1970, p. 84).

12. *Draconura nitens* was viewed by Vanzolini & Williams (1970, p. 84) not as a verifiable senior synonym of *Anolis chrysolepis* but as a name of 'uncertain application [and] uncertain geographical provenance'. The first term is equivalent to nomen dubium, defined in the Code (p. 111) as 'a name of unknown or doubtful application'.

13. By this time, the 1837 name *Anolis refulgens* (paragraph 4) had become a nomen oblitum (a forgotten name, rejected under Article 23b of the Code edition then in force). Because of that and as first revisers, Vanzolini & Williams (1970, p. 85) selected *Anolis chrysolepis* Duméril & Bibron (1837) as 'the earliest satisfactory name for any member of the group', noting that it fortuitously was also the 'most familiar name in the complex'. N.B.: *Anolis refulgens* currently has the status of a rejected name only in relation to *A. c. chrysolepis*, being otherwise potentially valid under Article 23.12.2. Hoogmoed (1973, pp. 123–124, 126–127) questioned the 'Surinam' type locality and assigned the *Anolis refulgens* description to *A. chrysolepis planiceps* Troschel, 1848, 'which probably does not occur in [modern] Surinam'. If this identification is corroborated by examination of the holotype of *Anolis refulgens*, the well-known junior name *Anolis planiceps* can easily be conserved as a nomen protectum by provisions of Article 23.9.2, which requires no action by the Commission.

14. Hoogmoed (1973, 1979) followed the nomenclature of Vanzolini & Williams (1970), but thought that none of the reasons given 'is sufficient to discard this name [*nitens*], for the original description is completely valid and the name has been in use

until recently, alongside the now accepted name *A. chrysolepis* Duméril and Bibron *which was more widely used* [emphasis added]. The only means of discarding *nitens* Wagler and ensuring nomenclatural stability is to ask the International Commission on Zoological Nomenclature to use its plenary powers to suppress *nitens* Wagler. A suggestion to this end has been made by me to Vanzolini and Williams.' (Hoogmoed, 1973, p. 124).

15. Savage & Guyer (1989, pp. 111–112) listed *chrysolepis* (under *Norops*) as a valid species of anole but included the name *nitens* among five nominal species 'of uncertain generic assignment and questionably valid', seemingly in agreement with Vanzolini & Williams (1970, p. 84). However, two years later Savage & Guyer (1991, p. 366) decided that '*nitens* had over 125 years of continuous usage [albeit not prevailing usage] for this species prior to 1970' and that Vanzolini & Williams action in setting aside *Draconura nitens* 'was not only contrary to the Code in effect at that time (and currently), but required destabilization of a long-accepted name.'

16. Hoogmoed (1973) and Savage & Guyer (1991) presumably believed that the synonymy of *Draconura nitens* and *Anolis chrysolepis* had been established by simple usage and that under edition of the Code then in effect the valid name of a taxon had to be the oldest available name applied to it, unless (as recommended by Hoogmoed) a junior name is preserved by the Commission. There is arguable merit in this interpretation. Literal reading of Article 23 in earlier editions (1961, 1985) of the Code might be interpreted to mean that, once applied, even an unidentifiable or erroneously applied subjective senior synonym not in prevailing usage must be maintained as valid under the Principle of Priority. But it seems questionable that such a consequence was originally intended by the Commission, which subsequently clarified the issue.

17. As a first underlying principle, the Code (1985, p. xiii; 1999, p. xix) 'refrains from infringing on taxonomic judgment, which must not be made subject to regulation or restraint'. The Commission elucidated part of the issue of taxonomic judgment in the 1999 edition of the Code (Article 23.3.6), whereby a junior synonym 'may be used as the valid name of a taxon by an author who considers the synonymy to be erroneous.' It is here argued that Vanzolini & Williams used sound taxonomic judgment and common sense in choosing *Anolis chrysolepis* as the valid name because it is the oldest available name that fell within their concept of the species in question, whereas the older and less-used *Draconura nitens* did not and does not fit that concept because it is a name of 'uncertain application' (i.e. a nomen dubium, see paragraph 12 above).

18. Ávila-Pires (1995) accepted Savage & Guyer's (1991) unexplained and arguable assertion that *Draconura nitens* corresponds to *A. chrysolepis planiceps* of Vanzolini & Williams. She stated that 'Considering the argumentation by [Savage & Guyer], and the fact that up to the present no application was made to the International Commission on Zoological Nomenclature to suppress *nitens*, I think there is no reason not to adhere to the well established rule of priority. Even considering that the type of *nitens* is lost, the name has been consistently linked to one taxon by *several* [emphasis added] authors, with no discrepancy between the taxon and the original description [but see paragraph 22]. Although some specimens from 'Suriname' were identified as *A. chrysolepis planiceps* (see Hoogmoed, 1973) and *A. nitens* by some authors, generally the name *nitens* was associated with specimens from Guyana and

Venezuela. This area corresponds to the distribution area of *A. c. planiceps* as used by Vanzolini & Williams (1970). Thus, in agreement with former usage and with the proposal of Savage & Guyer (1991), I consider the taxon occurring in Guyana and Venezuela as the nominal subspecies of *Anolis nitens*' (Ávila-Pires, 1995, p. 88).

19. However, problems are created in arbitrarily assigning the name *Draconura nitens* to a particular geographic area for purposes of fixing the nominotypical subspecies. The name *nitens* was used by 19th century authors for at least two species, with records purportedly from 'Surinamia [and] Brasilia' (Fitzinger, 1843), from 'Surinam' (e.g. Gray, 1845; Bocourt, 1874; Boulenger, 1885), and from Pebas on the upper Amazon (O'Shaughnessy, 1875, p. 277) – none of these areas being within the range of the subspecies *Anolis chrysolepis planiceps* (except that a few 'Surinam' specimens might have come from present-day Guyana fide Hoogmoed, 1973, p. 126) . Not until the 20th century was the name applied to specimens explicitly from Venezuela and Guyana (e.g. Fowler, 1913; Beebe, 1944). Selection of any area without neotype designation is equivalent to the unsanctioned concept of 'restriction of type locality' – the inventing or hypothesizing (vs. justifiable correction, Article 76.1, Recommendation 76A of the Code) of a type locality that is not binding under the Code and therefore without practical value (Myers & Böhme, 1996, p. 18).

20. Until Ávila-Pires (1995), the body of work using *Draconura nitens* (currently *Anolis nitens*) (often in parallel with *Anolis chrysolepis*) was not impressive, inasmuch as the name had been mentioned mostly in lists and by 1970 had been applied in print only to a few dozen specimens, mostly from Surinam, Guyana, and Venezuela, compared with 761 specimens later assigned by Vanzolini & Williams (1970, p. 13) to the better known name *Anolis chrysolepis*. Studies using the name *Anolis nitens* following Ávila-Pires (1995) include Gorzula & Señaris (1999), Glor et al. (2001), and McDiarmid & Donnelly (2005, p. 509).

21. No author has argued that Wagler's (1830) description of *Draconura nitens* demonstrably applies to *Anolis chrysolepis*, only that the name has priority and has been used for that species. The persistence of *Anolis nitens* as a valid name follows not from prevailing usage but from overly literal interpretation of Article 23 in earlier editions of the Code, and also perhaps from the wish to allocate as many old names as possible, 'often at a considerable stretch of imagination' (Stuart, 1933, p. 1). Nonetheless, despite the inadequacy of Wagler's description, his portrayal of color is so vivid that the name *Draconura nitens* could be assigned if a lizard were found matching that brief description – but would this hypothetical animal prove to be a rare variant of one of the known subspecies of *A. chrysolepis* s.l., or a representative of a rare or geographically restricted species not currently recognised (i.e. *A. nitens* s.s.)? The last possibility may seem unlikely, but it cannot be rejected out of hand because new species of anoles continue to be discovered. If based on a living lizard (see below), the original color description of *nitens* might prove diagnostic.

22. Myers & Donnelly (1997, pp. 58–60; 2008, pp. 102–107), treat *Draconura nitens* as a validly published and available name that nonetheless is a nomen dubium – a name not certainly applicable to any known species of lizard. These are the only authors to have explicitly compared characters from Wagler's description of *Draconura nitens* with known variation in *Anolis chrysolepis*. From the original description (paragraph 2), *Draconura nitens* is a green lizard lacking head, body, and tail patterning. In contrast, the variably dark-patterned *Anolis chrysolepis* is basically

brown or gray in life and in preservative, sometimes with a slight metallic gloss and sometimes grayish olive or with a slight greenish cast to the brown or gray ground color (Beebe, 1944, p. 197; Myers & Donnelly, 2008, p. 106) but seemingly never 'green' in any normal sense. Latin is rich in terms for shades of olive or greenish gray or brown, whereas the present participle *virescens* used by Wagler (1930) for the dorsal body color of *Draconura nitens* is one of several 'more or less accurate' synonyms of *viridis* fide Stearn (1983, p. 248). The variables of color change in preservative renders speculation about appearance of the lost holotype of *Draconura nitens* rather pointless fide Myers & Donnelly (1997, p. 59), especially when it is realised that Wagler received information on living colors of some tropical reptiles from some collectors (e.g. see color pls. in Wagler, 1824; 1828–1833). Therefore the green color and lack of dark head, body and tail markings in the original description of *Draconura nitens* cannot objectively be explained away.

23. Further comparison and discussion are given in Myers & Donnelly (2008, pp. 100–110), who follow Vanzolini & Williams (1970) in rejecting *Draconura nitens* as a valid senior synonym of *Anolis chrysolepis* and who use the junior name *Anolis chrysolepis* as allowed under authority of Article 23.3.6. The synonymy is subjectively erroneous for reasons given in paragraphs 11, 12, and 22.

24. I have come to believe that Hoogmoed (paragraph 14) was correct in suggesting that nomenclatural stability would best be served if the name *Draconura nitens* were suppressed by the Commission through its plenary power. Otherwise, the dual use of *Anolis nitens* and *Anolis chrysolepis* for the same species will remain a destabilising issue. Stabilisation through neotype designation seems unwarranted for *Draconura nitens* considering its confused history and the availability of a well-known, well-documented name that is only seven years younger. Although currently a nomen dubium, the possibility that *Draconura nitens* might be a diagnosable species waiting rediscovery (paragraph 21) argues against total suppression of the name. Conditional suppression relative to *Anolis chrysolepis* (Article 81.2.3) seems the best solution.

25. In passing, it should be noted that *Draconura nitens* is the type species of *Draconura* Wagler, 1830. *Draconura*, long in the synonymy of *Anolis* Daudin, 1802, has not been used as a valid name since the middle of the 19th century. Fitzinger (1843, p. 69) mentioned Wagler's *Draconura* but emended it to *Dracontura*, an unjustified emendation that becomes a junior objective synonym of *Draconura* (Articles 19.1, 33.2.1, 33.2.3). Acting as First Revisers (Article 24.2), Savage & Guyer (1991, 2004) reduced the likelihood that *Draconura* could ever be resurrected by directing that the names *Dactyloa* Wagler, 1830 and *Norops* Wagler, 1830 be given precedence over *Draconura* Wagler, 1830 if these names are ever thought to be applicable to the same taxon. Fitzinger (1843, p. 68) additionally erected the family-group name DRACONTURAE, which must be corrected to DRACONURIDAE Fitzinger, 1843 (Articles 11.7.1.3, 29.2, 32.5.3, 35.4.1 of the Code).

26. For nearly 40 years, the concept of the polytypic species *Anolis chrysolepis* has rested on the pioneering work of Vanzolini & Williams (1970), as most recently corroborated and amplified under the name *A. nitens* in Ávila-Pires' (1995) important monograph of Amazonian lizards. Vanzolini & Williams' (1970) study was contemporaneous with the ornithological investigations of Haffer (1969). These two studies advanced the theory that Quaternary climatic cycles induced contractions and expansions of tropical forest, leading to infraspecific differentiation and speciation of

plants and animals in forest refugia. A large biogeographic literature followed, and the myth of ancient, uniformly stable tropical forest unaffected by the vagaries of time was abandoned. Vanzolini & Williams (1970, pp. 12–13) demonstrated multiple levels of differentiation in *A. chrysolepis*, but believed that the infraspecific units recognised nomenclaturally are 'closest to species difference, and indicative, perhaps, of past and future potential species formation'. Indeed, the possibility of sibling species seems suggested by recent demonstration of substantial molecular divergence in the *A. chrysolepis* complex (Glor et al., 2001, p. 2666). It therefore is of broad interest that species-group names be accurately and unambiguously assigned in this geographic complex.

28. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to give the name *chrysolepis* Duméril & Bibron, 1837, as published in the binomen *Anolis chrysolepis*, precedence over the name *nitens* Wagler, 1830, as published in the binomen *Draconura nitens*, whenever the two are considered to be synonyms;

(2) to place on the Official List of Specific Names in Zoology the following names:

  (a) *chrysolepis* Duméril & Bibron, 1837, as published in the binomen *Anolis chrysolepis* and as defined by the lectotype (MHNP 2436, Mana, French Guiana) designated by Vanzolini & Williams (1970), with the endorsement that it is to be given precedence over the name *nitens* Wagler, 1830, as published in the binomen *Draconura nitens*, whenever the two are considered to be synonyms;

  (b) *nitens* Wagler, 1830, as published in the binomen *Draconura nitens*, with the endorsement that it is not to be given priority over the name *chrysolepis* Duméril & Bibron, 1837, as published in the binomen *Anolis chrysolepis*, whenever the two are considered to be synonyms.

Acknowledgements

I thank my colleague Jay M. Savage for reading an early draft of this proposal and for stimulating comments.

References

Ávila-Pires, T.C.S. de. 1995. Lizards of Brazilian Amazonia (Reptilia: Squamata). *Zoologische Verhandelingen (Leiden)*, **299**: [i-viii], 1–706.

Barbour, T. 1934. The anoles II. The mainland species from Mexico southward. *Bulletin of the Museum of Comparative Zoology*, **77**(4): 121–155.

Beebe, W. 1944. Field notes on the lizards of Kartabo, British Guiana, and Caripito, Venezuela. Part 2. Iguanidae. *Zoologica (New York)*, **29**(18): 195–216, pls. 1–6.

Berthold, A.A. 1840. Ueber verschiedene neue oder seltene Amphibienarten. *Göttingische Gelehrte Anzeigen*, **2**: 889–902.

Berthold, A.A. 1842. Ueber verschiedene neue oder seltene Amphibienarten. Pp. 1–28, pls. 1–2. Göttingen. (Preprinted [reprinted?], with added title page, from Berthold, '1843' [1842?], below.)

Berthold, A.A. '1843' [1842?]. Ueber verschiedene neue oder seltene Amphibienarten. *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen,* vol. 1 for 1838–1841, *Abhandlungen Physicalischen Classe*: 47–72, pls. 1–2.

Bocourt, M.-F. 1874. (plate caption) '*Anolis (Draconura) nitens*, ♂ (Wagler) . . . *Anolis refulgens*, type (Schlegel) Mus. de Leyde. De Surinam', pl. 16, figs. 25, 25*a*, 25*b* (drawings of head and digit). *In* Duméril, A.H.A., Bocourt, M-F., Mocquard, F. (1870–1909), *Mission scientifique au Mexique et dans l'Amérique Centrale, recherches zoologiques,* pt. 3, sect. 1. *Études sur les reptiles*, Atlas (livraison 3). Imprimerie Nationale, Paris.

Boulenger, G.A. 1885. *Catalogue of the lizards in the British Museum (Natural History)*, vol. 2, xiii, 497 pp., 24 pls. London.

Daudin, F.M. 1802. *Histoire naturelle, génerale et particulière des reptiles*, vol. 4, 397 pp., pls. 44–58. F. Dufart, Paris.

Donoso-Barros, R. 1968. The lizards of Venezuela (check list and key). *Caribbean Journal of Science*, **8**(3 & 4): 105–122.

Duméril, A.M.C. & Bibron, G. 1837. *Erpétologie général ou histoire naturelle complète des reptiles*, vol. 4, 571 pp. Librairie Encyclopédique de Roret, Paris.

Fitzinger, L. 1843. *Systema reptilium. Fasciculus primus, Amblyglossae*, 106, ix pp. Braumüller et Seidel, Vienna.

Fowler, H.W. 1913. Amphibians and reptiles from Ecuador, Venezuela and Yucatan. *Proceedings of the Academy of Natural Sciences of Philadelphia*, **65**, part 2: 153–176.

Glor, R.E., Vitt, L.J. & Larson, A. 2001. A molecular phylogenetic analysis of diversification in Amazonian *Anolis* lizards. *Molecular Ecology*, **10**(11): 2661–2668, pls., maps.

Gorzula, S. & Señaris, J.C. 1999. Contribution to the herpetofauna of the Venezuelan Guayana I. A data base. *Scientia Guaianae*, **8**: i–xviii, 1–268.

Gray, J.E. 1840. Catalogue of the species of reptiles collected in Cuba by W.S. MacLeay, Esq.; with some notes of their habits extracted from his MS. *Annals of Natural History*, **5**(29): 108–115.

Gray, J.E. 1845. *Catalogue of the specimens of lizards in the collection of the British Museum*, xxviii, 289 pp. Trustees of the British Museum, London.

Haffer, J. 1969. Speciation in Amazonian forest birds. *Science*, **165**(3889): 131–137.

Hoogmoed, M.S. 1973. *Notes on the herpetofauna of Surinam IV. The lizards and amphisbaenians of Surinam*. [Biogeographica **4**]: ix, 419 pp. W. Junk, The Hague.

Hoogmoed, M.S. 1979. The herpetofauna of the Guianan Region. Pp. 241–279 *in* Duellman, W.E. (Ed.), *The South American herpetofauna, its origin, evolution, and dispersal.* Monograph of the Museum of Natural History, The University of Kansas, no. 7.

Lidth de Jeude, T.W. van. 1917. *Anolis lineatus*. P. 46 *in* Benjamins, H.D. & Snelleman, J.F., *Encyclopaedie van Nederlandsch West-Indië*. E.J. Brill, Leiden.

McDiarmid, R.W. & Donnelly, M.A. 2005. The herpetofauna of the Guayana highlands: amphibians and reptiles of the lost world. Pp. 461–560 *in* Donnelly, M.A., Crother, B.I., Guyer, G., Wake, M.H. & White, M.E. (Eds.), *Ecology & evolution in the tropics. A herpetological perspective.* University of Chicago Press, Chicago.

Myers, C.W. & Böhme, W. 1996. On the type specimens of two Colombian poison frogs described by Berthold (1845), and their bearing on the locality 'Provinz Popayan'. *American Museum Novitates*, **3185**: 1–20.

Myers, C.W. & Donnelly, M.A. 1997. A tepui herpetofauna on a granitic mountain (Tamacuari) in the borderland between Venezuela and Brazil: report from the Phipps Tapirapecó Expedition. *American Museum Novitates*, **3213**: 1–71.

Myers, C.W. & Donnelly, M.A. 2008. The summit herpetofauna of Auyantepui, Venezuela: report from the Robert G. Goelet American Museum-Terramar Expedition. *Bulletin of the American Museum of Natural History*, **308**: 1–147.

O'Shaughnessy, A.W.E. 1875. List and revision of the species of Anolidae in the British-Museum collection, with descriptions of new species. *The Annals and Magazine of Natural History*, (4)**15**(88): 270–281.

Peters, L.A. & Donoso-Barros, R. 1970. Catalogue of the Neotropical squamata. Part II. Lizards and amphisbaenians. *United States National Museum Bulletin*, **297**: i–viii, 1–293.

Peters, W. 1863. Über einige neue *Arten der Saurier-Gattung Anolis. Monatsberichte der Königlichen Preussischen Akademie der Wissenschaften zu Berlin*, **1863**: 135–149.

Roze, J.A. 1958. Los reptiles del Auyantepui, Venezuela, basándose en las colecciones de las expediciones de Phelps-Tate, del American Museum of Natural History, 1937–1938, y de la Universidad Central de Venezuela, 1956. *Acta Biologica Venezuelica*, **2**(22): 243–270.

Savage, J.M. & Guyer, G. 1989. Infrageneric classification and species composition of the anole genera, *Anolis, Ctenonotus, Dactyloa, Norops* and *Semiurus* (Sauria: Iguanidae). *Amphibia-Reptilia*, **10**(2): 105–116.

Savage, J.M. & Guyer, G. 1991. Nomenclatural notes on anoles (Sauria: Polychridae): stability over priority. *Journal of Herpetology*, **25**(3): 365–366.

Savage, J.M. & Guyer, G. 2004. Application of anole lizard generic names proposed by Wagler, 1830 and Fitzinger, 1843. *Amphibia-Reptilia*, **25**(3): 303–305.

Shreve, B. 1947. On Venezuelan reptiles and amphibians collected by Dr. H.G. Kugler. *Bulletin of the Museum of Comparative Zoology*, **99**(5): 519–537.

Stearn, W.T. 1983. *Botanical Latin*, Ed. 3, xiv, 566 pp. David & Charles, Newton Abbot, Great Britain.

Stuart, L.C. 1933. Studies on Neotropical Colubrinae II. Some new species and subspecies of *Eudryas* Fitzinger, with an annotated list of the forms of *Eudryas boddaertii* (Stentzen). *Occasional Papers of the Museum of Zoology University of Michigan*, **254**: 1–10.

Test, F.H., Sexton, O.J. & Heatwole, H. 1966. Reptiles of Rancho Grande and vicinity, Estado Aragua, Venezuela. *Miscellaneous Publications Museum of Zoology, University of Michigan*, **128**: 1–63.

Troschel, F.H. 1848. Amphibien. Pp. 645–661 *in* Schomburgk, R., *Reisen in Britisch-Guiana in den Jahren 1840–1844*, Theil 3, *Versuch einer Fauna und Flora von Britisch-Guiana.* Verlagsbuchhandlung von J.J. Weber, Leipzig.

Vanzolini, P.E. & Williams, E.E. 1970. South American anoles: the geographic differentiation and evolution of the *Anolis chrysolepis* species group (Sauria, Iguanidae). *Arquivos de Zoologia (São Paulo)*, **19**: 1–298.

Wagler, J.G. 1824. *Serpentum brasiliensium species novae ou histoire naturelle des espèces nouvelles de serpens* . . .viii, 75 pp., erratá page, 26 colored pls. F.S. Hübschmann, Munich.

Wagler, J.G. 1828–1833. *Descriptiones et icones amphibiorum.* Fascicles 1–3 (36 pls.). J.G. Cotta, Munich.

Wagler, J.G. 1830. *Natürliches System der Amphibien, mit vorangehender Classification der Säugthiere und Vögel*, vi, 354 pp., 9 folio pls. J.G. Cotta, Munich.

Wiegmann, A.F.A. 1834. *Herpetologia Mexicana, seu descriptio amphibiorum Novae Hispaniae . . . Pars prima, saurorum species* . . ., vi, 54 pp., 10 pls. C.G. Lüderitz, Berlin.

Acknowledgement of receipt of this application was published in BZN **65**: 2.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).